

SHORTER NOTES

New Occurrences of *Schizaea pennula* Sw. in Florida.—*Schizaea pennula* Sw. was discovered recently in two South Florida conservation areas: Big Cypress National Preserve (BICY), Collier County, and Prairie Pines Preserve (PPP), Lee County, Florida. While conducting a floristic inventory of BICY, plants were encountered in three areas within a nine kilometer radius of each other. The first colony was found in late February 2002 in a recently burned tract of mesic pine flatwoods. Roughly 50 plants were found growing in sand amidst exposed roots of *Serenoa repens* (W. Bartram) Small as well as in the persistent leaf axils of the *S. repens* trunks. In addition, one plant was observed growing in the sandy soil with little organic matter at the base of a *Pinus elliottii* Engelm. var. *densa* Little & K.W. Dorman stump. A single collection was made at this population (Woodmansee #1104; FTG) with permits from the National Park Service and the Florida Department of Agriculture and Consumer Services. A week later a second colony of about 20 plants was discovered in fire suppressed mesic pine flatwoods, growing in similar but shadier circumstances. A third colony was discovered in March 2004 also growing in mesic flatwoods in similar circumstances. Plants found in association within the three populations include: *Lyonia fruticosa* (Michx.) G.S. Torr., *Ilex glabra* (L.) A. Gray, *Piloblephis rigida* (W. Bartram ex Benth.) Raf., *Polygala nana* (Michx.) DC., *Dichantheium strigosum* (Muhl. ex Elliott) Freckmann var. *glabrescens* (Griseb.) Freckmann, *Dichantheium ensifolium* (Baldwin ex Elliott) Gould var. *unciphyllum* (Trin.) B.F. Hansen & Wunderlin, *Vaccinium myrsinites* Lam., *Serenoa repens*, *Pinus elliottii* var. *densa*, and *Quercus virginiana* Mill.

In December 2003 *Schizaea pennula* was discovered at the Lee County owned conservation area Prairie Pines Preserve. Three colonies were observed in three different areas of mesic flatwoods. A single collection was made at this population (Woodmansee #1348; FTG) with permits from Lee County and the Florida Department of Agriculture and Consumer Services. The three colonies comprised of an estimated total of 80–90 individuals. Plants were growing in mesic and wet to mesic flatwoods in sandy soil, a habitat reminiscent of the Big Cypress population. Plants found in association with this population include: *Bejaria racemosa* Vent., *Carphephorus odoratissimus* (J.F. Gmel.) H. Hebert var. *subtropicus* (DeLaney et al.) Wunderlin & B.F. Hansen, *Cassytha filiformis* L., *Dichantheium ensifolium*, *D. portoricense* (Desv. ex Ham.) B.F. Hansen & Wunderlin, *D. strigosum* var. *glabrescens*, *Habenaria* sp., *Ilex glabra*, *Imperata brasiliensis* Trin., *Lyonia fruticosa*, *Myrica cerifera* L., *Piloblephis rigida*, *Pinus elliottii* var. *densa*, *Scleria ciliata* Michx., and *Serenoa repens*. The Prairie Pines Preserve population is ca. 111 km northwest of the closest plants within the Big Cypress National Preserve. Plants belonging to these new populations appear to be the typical smaller neotonic form described for Florida (Wunderlin, R.P.,

and B.F. Hansen. 2000. *Flora of Florida, Volume 1*. The University Presses of Florida, Gainesville.).

These records are significant as the only other extant populations of *Schizaea pennula* known to exist in the continental United States are in Palm Beach County at Loxahatchee National Wildlife Refuge (Gann, et. al., *Rare Plants of South Florida, Miami*. The Institute for Regional Conservation, 2002). It is significantly threatened there by the non-native invasive Old World Climbing fern (*Lygodium microphyllum* (Cav.) R. Br.). In addition, this new occurrence occupies a different plant community type from the plants at Loxahatchee, where the authors recently observed it growing in tree islands on root balls of *Osmunda cinnamomea* L. and on rotting logs.

Historically, *Schizaea pennula* was known from Miami-Dade County, Florida, where it was first discovered in 1904 by A.A. Eaton (996, GH, USF) near the headwaters of the historic Miami River. John K. Small reports an occurrence of it “over a decade later” at Royal Palm Hammock, in what is now Everglades National Park (Small, J.K. 1938: *Ferns of the Southeastern States*, The Science Press, Lancaster). One other report was made for Pinellas County, Florida, (approximately 140 km north of the Prairie Pines Preserve population) where John Beckner discovered plants in pine flatwoods (J. Beckner, *Amer. Fern J* 43:125, 1953). Due to habitat destruction along the Miami River, and failed surveys by the authors at Royal Palm Hammock in 2004, and others at the Pinellas County population (Darling, Thomas Jr. *Amer. Fern J* 51 (1):1–15, 1961), it seems unlikely that plants are present at these locations. Outside of the United States, *Schizaea pennula* is also found in the West Indies, Central America and South America (Wunderlin & Hansen 2000).

Although it is diminutive in size and easily overlooked, in the future more populations of this rare tropical fern are likely to be found.

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Confirming Dioecy in *Isoëtes butleri*.—*Isoëtes butleri*, a tufted spring ephemeral on seasonally moist alkaline soils in the central US, occurs in central Texas, south central Oklahoma, southeastern Kansas, northern and western Arkansas, southern and central Missouri, south central Kentucky, central Tennessee, northern Alabama and northwest Georgia (Lott *et al.*, 1982, *Sida* 9:264–266). More recently, *I. butleri* has been reported as far north as Will County in northeast Illinois (Taylor and Schwegman. 1992. *Amer. Fern J.* 82:82–83).

George Engelmann originally described *Isoëtes butleri* (1878. *Bot. Gaz.* 3:149.). In this description, Engelmann noted that George Butler, who dis-